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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/056,533	01/23/2002	Ying Jia	42390P10369	6044

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EXAMINER

ALBERTALLI, BRIAN LOUIS

ART UNIT	PAPER NUMBER
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2655

DATE MAILED: 06/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/056,533

**Applicant(s)**

JIA ET AL.

**Examiner**

Brian L Albertalli

**Art Unit**

2655

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-5, 7-11, 16-22, 27 and 28 is/are allowed.
- 6) ☒ Claim(s) 12-15, 23-26, 29 and 30 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

The amendments to the claims have been entered. Claims 1, 6-7, 10, 12, 14-16, 21-23, 25-27, and 29 are currently amended.

### ***Response to Arguments***

Applicant's arguments, see page 13, 2<sup>nd</sup> paragraph, filed March 21, 2005, with respect to claims 1-4, 6-11, 16-19, 22-21, and 27-28 have been fully considered and are persuasive. The rejections of claims 1-4, 6-11, 16-19, 22-21, and 27-28 have been withdrawn.

Applicant's arguments, see page 13, 3<sup>rd</sup> paragraph, filed March 21, 2005, with respect to the rejection(s) of claim(s) 12-15, 23-26, and 29-30 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Furthermore, while claims 14 and 25 were previously indicated as having allowable subject matter, upon further consideration, a new ground(s) of rejection is under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

### ***Claim Objections***

The amendments to the claims overcome the objections made in the previous Office Action. The objections to the claims made in the previous Office Action are withdrawn.

However, claim 6 is objected to because, as currently amended, the first line of the claim reads "The method of claim 5, A method comprising". This appears to be a typographical error.

In accordance with the Applicant's presented arguments (see page 12, 3<sup>rd</sup> paragraph), claim 6 has been interpreted herein as an independent claim (i.e. "A method comprising...").

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 12-15, 23-26, and 29-30 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 12-15, 23-26, and 29-30 are drawn to a mathematical algorithm, per se, or program performing such or medium resulting from such. Claims to processes that do nothing more than solve mathematical problems or manipulate abstract ideas or concepts are non-statutory. If the "acts" of a claimed process manipulate only numbers,

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abstract concepts or ideas, or signals representing any of the foregoing, the acts are not being applied to appropriate subject matter. Schrader, 22 F.3d at 294-95, 30 USPQ2d at 1458-59. Thus, a process consisting solely of mathematical operations without some claimed practical application is drawn to non-statutory subject matter.

In this case independent claims 12, 14, 23, 25, and 29 are directed to methods, machine readable mediums having stored thereon executable code for causing a machine to perform a method, and a system providing means for providing a first transformation matrix and a second transformation matrix, wherein processing steps are performed on the matrixes to generate an output. Neither the transformation matrixes nor the output are claimed to have any practical application. Rather, the claims amount to a mere manipulation of matrixes to produce a generic "output", and thus amount to nothing more than a manipulation of numbers.

Dependent claims 13, 15, 24, 26, and 30 fail to remedy the deficiencies of their respective parent claims, and thus are also rejected.

### ***Allowable Subject Matter***

Claims 1-5, 7-11, 16-22, and 27-28 are allowed.

The following is an examiner's statement of reasons for allowance:

the prior art of record does not disclose and would not suggest to one of ordinary skill in the art at the time of invention an objective function determined based on a diagonal covariance matrix based on a product of *both* the MST and the FST, as required by independent claims 1, 16, 21, and 27.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Claim 6 would be allowable if amended to overcome the minor informalities indicated above under the Claims Objections heading.

Claims 12-15, 23-26, and 29-30 would be allowable if rewritten to overcome the non-statutory subject matter rejections under 35 U.S.C. 101 made above. Claims 12-15, 23-26, and 29-30 should be amended to include language to clearly indicate statutory subject matter (e.g. that the transformation matrixes and output are related to real-world speech signals).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian L Albertalli whose telephone number is (571) 272-7616. The examiner can normally be reached on Mon - Fri, 8:00 AM - 5:30 PM, every second Fri off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on (571) 272-7582. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BLA 6/6/05

A handwritten signature in black ink, consisting of a series of loops and a long horizontal stroke extending to the right.

**W. R. YOUNG  
PRIMARY EXAMINER**